THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XXI. WEDNESDAY, JANUARY 15, 1840. No. 23.

SIR B. BRODIE'S CLINICAL REMARKS ON ULCERS.

I SHALL make but a few general observations upon ulcers, as I shall have to speak to you at large upon some of the particular species of these morbid degenerations of structure. It is somewhat difficult to give a correct definition of what an ulcer really is. We say that a part is ulcerated, when some portion of the solid structure is absorbed, and the exposed surface presents a suppurating aspect. Internal ulcers, as they are sometimes termed, come more particularly under the care of the physician; but, as I have just said, ulcers on the external surface of the body, not depending on any poison as a cause of their presence, are very difficult to describe in words, on account of the great variety that are presented to the observation of the surgeon. I will first, then, speak of

Healthy Ulcers.—These are such as may be caused by the application of caustic, or from an incision made with a knife. These ulcers secrete a thick, white pus, of the color of cream; the granulations are small and pointed, and of a florid red color. Generally speaking, a healthy ulcer will heal of its own accord; but it is generally necessary to apply some simple dressing to it, and place a roller over this, as it will prevent its scabbing. When the ulcer is of a large size, you will heal it best by the application of stimulants. These substances vary, but they have all one common purpose. They are generally used in the form of diluted nitric acid, or a solution of the sulphate of copper, or sulphate of alum; but, perhaps, none are so efficacious as a solution of nitrate of silver, in the proportion of two grains to one ounce of water. There is very great discretion necessary in the application of these stimulants. The ulcer may be over stimulated, or the reverse may be the case. When the ulcer is of a large size, its cicatrization may be promoted by gently purging the patient, and applying straps of adhesive plaister to the ulcer. An ulcer in the neck, caused by a burn, will heal; but if great care is not taken, the cicatrix will contract, and the chin will be bound down to the sternum. This, of course, causes great inconvenience to the patient, and you may, perhaps, imagine that the relief is very easy, and say, "cut across the cicatrix?"—aye, aye, you may cut across the cicatrix, if you like, but it will form again, and become still more contracted. It was in such cases as these that the late Mr. Earle proposed to dissect out the cicatrix and bring the parts together in such a manner that the contraction shall not be productive of

any inconvenience. I have performed this operation of excising the cicatrix in several instances;, but I cannot say that I have ever been perfectly satisfied with the result. There are some appearances which ensue after burns, and which very much resemble ulcers, but they are not ulcers in reality; these are best treated by sprinkling a little powdered prepared calamine on them. There are some ulcers which do not heal very readily; this generally results from weakness of parts. In such cases the granulations are large, and grow very rapidly; they are pale in appearance, and possess but little vascularity, whilst their surface is soft, spongy, and very irregular. Now, in such a case as this, you must restore the strength of your patient's constitution, by giving him bark and such other tonics as he requires. You will do much in this way, but you will do more by attending to the local treatment of the ulcer. If you find the granulations grow above the surface of the skin, you must touch them with the solution of the nitrate of silver, or with the oxidized ointment of the nitrate of mercury, and strap it with adhesive plaister. If you find an ulcer become very irritable, you may make pressure on it with adhesive plaister and a bandage; this is an old but very excellent way of treating these cases. The adhesive plaister should be spread on cloth and cut into strips an inch in breadth. Apply one strip some distance below the wound, the next half way over the first, the next half way over the second, and so on, till you have arrived over the ulcer. Take care that the pressure is equal; much pressure is not needed in these cases. When there is much discharge, the adhesive plaister should be changed daily; when there is not much, every other day will be quite sufficient.

Indolent Ulcers.—You will meet with these most frequently in the leg. They generally occur a little below the level surface of the skin, have no granulating surface, and the discharge from them is not of pus, but of flakes of coagulable lymph. The edges of the surrounding skin are thick, prominent and smooth, on their upper surface. If such an ulcer as this comes under your care, put your patient to bed, apply fomentations and poultices, and, when the inflammation has subsided, apply some adhesive plaister to the ulcer, with a roller over it. Or you may, if you please, use some stimulating ointment to the part.

Sloughing Ulcers.—These are ulcers that spread partly by suppuration and partly by absorption. They are attended by considerable pain and surrounding inflammation, and the discharge from the ulcerated surface is very copious and offensive. These ulcers cause great constitutional disturbance. The pulse becomes quick, the skin is hot and dry, and the tongue furred. In treating such an ulcer, you must first ascertain what the constitutional cause may be, whether it may arise from the internal irritation of mercury or any other poison in the system. The patient should be kept in a perfect state of quietude. When there is much pain, and a line of limitation between the sloughing and healthy surface shows itself, you will find that the internal use of opium in the dose of from four to five minims of the tincture will prove of great service. There are some of these cases which are benefited by bark. When the ulcer is not very painful, and the pulse is feeble, you will

find the tonic plan of treatment to be the best. When there is a great deal of sloughing, and the skin is dry and hot, you will aggravate the disease by giving stimulants. You must, in such a case, take blood from the arm, which you will find has the buffy coat; with this you must combine purgatives and diaphoretics. The local treatment may consist of cold applications, or the white way ointment, or the chlorate of soda; but I would particularly recommend to you the compound tincture of benzoin. To apply this, dip a piece of lint in the tincture and apply it over the ulcer, and prevent it from evaporating, by putting dry lint over it. When the sloughing has stopped, merely wash the parts with the tincture, and apply adhesive strapping over it. There is no general rule of treatment, for according to the external appearance of the ulcer and to the constitutional disturbance of the system, so must be the remedies. Another mode of cure is to stop the sloughing of the ulcer, by applying the concentrated nitric acid to it; but I prefer the mode of cure by the compound tincture of benzoin. In France they use the actual cautery to these ulcers.

Irritable Ulcers.—These generally begin in the form of an eruption, terminating in an ulcer, which is extremely painful, and sometimes bleeds, and has jagged edges. The chief characteristics of this species are, extreme pain and a great indisposition to heal, and their depending upon a cachectic diathesis of system. Different cases require different treatment. The most general mode of treating these ulcers is in exhibiting small doses of mercury with the decoction of sarsaparilla. Sometimes the digestive organs are affected, and then you must give bitters. You must bear in mind that these ulcers always depend upon a cachectic state of constitution. The local application may consist of a carrot poultice, with one drachm of the extract of hemlock beat up with it. In some cases Peruvian bark may be applied in powder to the ulcer. Stimulating ointments are sometimes beneficial, whilst at other times they are injurious. The difference between sloughing ulcers and irritable ulcers is this, that the former affect the constitution, and cause the disturbance, whilst the latter are caused by the cachectic state of the constitution.—*Lancet.*

GANGRENE OF THE LUNGS—BRONCHITIS—PHTHISIS.

FROM THE CLINICAL LECTURES OF DR. W. W. GERHARD, PHILADELPHIA.

I SHALL now show you some cases of gangrene of the lungs, and bronchitis, the symptoms of which more or less resemble those of phthisis, and the diagnosis becomes, therefore, frequently difficult.

Gangrene of the lungs is by no means a frequent disease; it is oftener met with in hospitals than in private practice. It resembles phthisis, inasmuch as it produces softening of the pulmonary tissue, and, consequently, the formation of cavities. It differs from it in the fetor of the breath, and expectoration. The local signs, at the commencement of the disease, are imperfect.

The causes of gangrene of the lungs are cold, an epidemic tendency of the atmosphere, intemperance, and depressing circumstances generally.

In most cases, it arises from direct exposure, but sometimes it comes on gradually, and appears to be part of a general disease; that is, it depends on a vitiation of the fluids, in the same way with dry gangrene, of which I have shown you an example.

Case.—The patient is a boatman forty years of age. He had enjoyed good health till about two months before his entrance into the hospital. At that time, being engaged at his occupation on the Schuylkill, he fell into the river, and was with difficulty saved from drowning. He felt extremely cold, and could not speak for twenty minutes, but no sign of active disease followed for two weeks, other than feebleness and chilliness. Then a cough began, accompanied by pain in the lower part of the right axillary region; the sputa have never contained blood, and have been fetid from the beginning; appetite has been bad throughout; the patient continued to work regularly until November 30th; but since that time he has been unable to perform any kind of labor. The treatment, previously to his entrance into the hospital, consisted of venesection, and the application of a blister to the right side of the chest.

The patient was admitted December 6th. At that time the symptoms were as follows: slight emaciation; a dusky hue of the skin; slight flushing of the face; dilatation of the nostrils; skin warm; pulse 140, thrilling, moderately resisting; respiration 22, high and labored; expectoration thick and homogeneous, of a dirty, grayish color, and very fetid. On the right side, anteriorly, respiration vesicular throughout, with traces of the mucous râle, hurried and harsh at the summit of the lung. On the left side, vesicular, with traces of both mucous and sonorous rhonchi. *Posteriorly*, on the right side, vesicular in upper lobe, hurried, and very feeble; in lower lobe, scarcely any vesicular sound; at the upper part, deep-seated, cavernous respiration, and imperfect pectoriloquy. Percussion gives a flat sound in the lower two-thirds of right side posteriorly; clear anteriorly. The signs, therefore, indicated a cavity in the lower lobe of the right lung, with an engorged condition of the surrounding tissue, accompanied by pleurisy. The treatment has consisted in the use of chloride of soda, given in doses of twenty drops four times a day, with nourishing diet. Quinine, porter and brandy are often necessary; the indications being to correct the fetor of the breath and expectoration, and support the system, while nature effects the elimination of the gangrenous tissue. A number of palliatives, as opiates at night, will doubtless occur to you; but you should be sparing of depletory measures; they are rarely necessary, except when there is severe pleuritis near the gangrene; and these should be limited to local bleeding, or still better, to blisters.

Gangrene of the lungs is to be distinguished from phthisis by these circumstances; it usually begins suddenly, and runs its course rapidly; the skin presents a more decided dusky hue in gangrene, than in phthisis; and the breath and expectoration are always fetid from the commencement of gangrene. The prognosis of the two diseases is also very different. In gangrene it is not necessarily unfavorable; from one third to one half of the cases recover; in phthisis, on the contrary, our prognosis is almost always unfavorable after a cavity is formed. When gan-

grene tends to a favorable termination, recovery generally takes place in a few weeks. Any improvement in the symptoms of phthisis, on the contrary, is very gradually effected.

There are two kinds of expectoration met with in gangrene of the lungs. The most common is blackish, and resembles an inky sediment. The other kind, of which we have an example in the present case, is a grayish, frothy fluid, having some resemblance to yeast, with a fetid odor, which you may perceive is like that of putrid oysters. This, though the least common, is the most favorable variety of sputa. It is generally discharged in very large quantities—amounting, sometimes, to a pint or a quart daily.

I have frequently described, in my lectures, the progress of cure in gangrene. When the sphacelated portion is thrown off, a cavity is formed, lined with the usual pus, secreting false membrane, which gradually assumes the character of a mucous membrane. We shall watch the progress of this case, and keep you informed of the result.

The next case is one of bronchitis. The patient is a laborer, aged 35 years. He entered the hospital on the 2d inst., having been ill for two weeks. He was seized with cough, and pain along the sternum; in the course of a week he began to expectorate a muco-purulent matter, containing no blood; during the most of the time he has been confined to bed. These signs indicate an acute disease, which might be mistaken for the acute form of phthisis. It is distinguished from it, by the absence of the irritable, jerking pulse of phthisis, described in our last lecture, and also, by the absence of the local signs of tubercular deposition. Thus there is no flatness on percussion under the clavicles; and the mucous rhonchus is heard in the sound of respiration throughout the lower lobes of both lungs. But though bronchitis is thus distinguished from phthisis in the commencement, both by the general and local signs, yet it is very apt to terminate in the latter disease, and we ought always to anticipate such a result when it is prolonged, and occurs in young persons.

The next case is a complication of phthisis and bronchitis. The patient is a boatman, 38 years of age, of intemperate habits. He has been sick for three months, and unable to work during the whole of this time; his illness was caused by falling into the canal; the next day he was seized with shivering and cough, accompanied by pain; the expectoration consisted of mucus mixed with pus, but no blood. On the 4th inst. he entered the hospital, and the symptoms were as follows: There was abundant mucous rhonchus throughout both lungs, passing in certain portions into the sub-crepitant, while at the summit of the left lung, the percussion is dull and the respiration extremely bronchial. There is a quick irritation, some emaciation, and a dry, husky skin. The sputa, although not nummular, are more purulent than is usual in cases of bronchitis. The dyspnœa is much greater than in most cases of phthisis or uncomplicated bronchitis.

This case began in the form of bronchitis: phthisis was developed subsequently, and the two diseases are now co-existent. This state of things is of frequent occurrence, particularly at advanced periods of life.

At an early age, when phthisis is developed in the course of a bronchitis, it is apt to commence more suddenly, and run its course more rapidly than in the present instance. The patient, you perceive, is but slightly emaciated, and will probably get comparatively well; that is, the disease may continue for years with slight cough, &c., but may not shorten the patient's life; the cavity in the lung remaining, but lined with a healthy membrane. I have known several cases of such comparative recovery, from this form of disease; the chances of long life are not afterwards apparently affected by it.

You will now understand that phthisis pulmonalis may commence in several different forms:

1. It may commence *slowly and gradually*. This is the most common mode of origin, and is generally met with in cases where the tubercular diathesis is hereditary. The first symptoms of the disease are slight cough and expectoration; the local physical signs are not present until a more advanced stage.

2. Phthisis may arise from *inflammation*. This variety is most common in robust persons, and is likewise, in most instances, dependent upon a hereditary predisposition, which imparts to inflammation a tendency to terminate in the formation of tubercles. The most common seat of the inflammation preceding phthisis, is some one or other of the serous membranes; and the tubercles may at first be deposited either in the serous membranes alone, in the lungs, or in both. The mucous membrane of the bronchial tubes may likewise be the seat of the inflammation; but phthisis beginning in the latter way, is more commonly met with in old persons, than that which begins by the serous membranes.

Inflammation performs two distinct parts; in the one it is properly the cause of the tuberculous deposition which may occur some time after the inflammation, or take place during the progress. In the second, the secretion of tubercle is attended with an acute inflammatory action in the organs, but the cause of the tubercles cannot be said to be the inflammation which attends their secretion.

3. The *hæmorrhagic* variety. In this, hæmoptysis, whether preceded by a violent effort or not, constitutes the first symptom.

But these different forms of phthisis, though differing so much in their origin, after a certain period present the same character; they are all attended by emaciation, cough, expectoration consisting of pus and softened tubercular matter, hectic fever, and all the other signs which mark the more advanced stage of the disease. The progress of phthisis is most rapid when produced by inflammation of the serous membranes, especially in young subjects; it is less so when preceded by bronchial inflammation. The hæmorrhagic variety is likewise rapid in its course; the slowest of all is that which is constitutional and hereditary. All of these forms are liable to be confounded with other diseases; thus, the first may be mistaken for simple serous inflammation; the second for bronchitis; the third for hæmorrhage arising from other causes.

We might multiply the varieties of phthisis almost to an indefinite number, but the preceding are the most important, and may be considered as the landmarks in the study of the disease; under one or other of

these classes, all other forms may be included. There are, likewise, other tubercular affections, not commencing in the lungs, and only implicating them secondarily; but phthisis pulmonalis is by far the most frequent form in which the tubercular diathesis developes itself.—*Med. Examiner.*

BITE OF A LIZARD.

To the Editor of the Boston Medical and Surgical Journal.

Dear Sir,—As I have not opportunity to examine the classification of *venomous* reptiles of the United States, I have copied from my diary the following singular case of the bite of the large *green spotted lizard*, so called. The case involves a question for the naturalist, rather than the physician. It is therefore submitted to your decision, whether its publication in your Journal may not elicit some new light of a scientific, if not practical nature. As the symptoms are entirely abnormal, partially tinctured as they were with those of a tetanic character, I shall give them precisely as they were noted at the time, and leave others to their own pathological inferences.

On the 31st of Aug., 1836, I was called to a little girl, 13 years of age, the daughter of Capt. Joseph G. Rowe, of Georgetown, about nine miles from my residence in Boothbay, Me. Thirteen days previous to my visit, this little girl, as she was gathering an armful of sticks, felt something *pricking severely* the inside of the sole of the left foot. On looking down she discovered a large, green spotted lizard fastened to her *naked* foot, which she extracted with a fold of her gown, and with it that portion of skin on which it had seized. The next day she complained of numbness in the foot, as though it had been deprived of sensation by cording the ankle, and that occasional "prickling" that occurs on the return of circulation. The numbness continued extending upward —the whole limb became severely swollen, and the most excruciating pain on the slightest motion followed; and over the direction of the lymphatics, I observed the inflammatory blush. The muscles of the neck and jaw of that side were rigid and tender to the touch; much difficulty of swallowing; occasional delirium, particularly the first week, and a wonderfully increased mental acumen during her intervals of reason. The whole *left* side continued paralyzed, and the pain unabated. A short time before death, the limb became *spotted*. She lingered along in great agony until the 21st day of the bite, when death terminated her sufferings.

Owing to my distance from the patient, I had not opportunity for an autopsy, or to examine whether a filament of the internal *plantar nerve* might not have been wounded; but there were so many symptoms of the introduction of a morbid septic *poison* into the system, that I carefully recorded them at the time, more particularly as these symptoms, it is well known, bear a close analogy to tetanus. I have excluded the *treatment* in this case; 1st, owing to the time that elapsed previous to my visit; 2d, because the sole object of this communication is to ascer-

tain, through your Journal, whether the *lizard tribe* are *venomous* (which has been doubted), and whether in tetanus, the paralysis, great tumefaction, and spotted livid appearance, *before*, and gangrenous, *after*, death, are symptoms that ever occur. Yours, with much respect,

Boothbay, Me., Dec. 28, 1839. SIDNEY B. CUSHMAN.

THE LATE DR. ISAAC SMITH.

[Communicated for the Boston Medical and Surgical Journal.]

THE death of Dr. Isaac Smith, of Chatham, Ct., has already been mentioned in the Journal.

Dr. Smith was a native of East Hampton Society, where he spent his early days in acquiring the elements of that education, which was the foundation of, and prepared the way for, the usefulness so manifest in his after life. He commenced medical practice, after completing his course of studies with reference to that pursuit, at N. Killingworth, where he resided a few years, and there became familiar with that description of typhous fever which has prevailed to some extent the present season; and afterwards established himself in his profession at Chatham, where he continued to practise until his death, a period of 39 years.

In his deportment and intercourse with the members of his profession, he was always open, candid, frank and hospitable. With the sick, upright, beloved, kind, attentive and sympathizing, always ready to sacrifice his comfort, ease and happiness, for the good of his patient. His practice was plain, and well adapted to the case, and his mature judgment and long experience gave him a claim to confidence, which was rarely disappointed. He was a regular attendant upon divine service, and a communicant of the Congregational church, always appearing to rejoice in Christian privileges and duties.

Though the friends of the deceased wish not for the "language of panegyric," nor do we claim for him the most distinguished talents, or that he was pre-eminently skilful in *all* the diseases to which a community is incident, yet he possessed, in an eminent degree, the key to the finer sensibilities of the soul, and knew the sympathies and idiosyncrasies of his subjects, and could more readily address his conversation, and adapt his prescriptions, to their case, than, now, can any other.

The disease which caused his death was a fever, mild in its attack, and he was enabled to attend to his professional duties, with few exceptions, until about a week before it terminated. He seemed unaware of the lurking mischief which was undermining his constitution. Retching and vomiting, with a redundant secretion of vitiated bile, and distressing hiccough, with tympanitis, were the most urgent symptoms in the last stage, which continued until the system gave way. In his sickness he was seldom heard to complain, though during the last week his sufferings were great. The calmness and composure with which he met death, evinced most clearly the character of the man. With a strong reliance upon a Saviour, and his soul firmly stayed upon his God, he bid adieu

to his family, his friends, and the world, on the night of the 19th of Dec., aged 67 years, in the full hope of an immortality beyond the grave. T. M., 2d.

Middletown, Dec. 25, 1839.

EXPERIMENTS ON DIGESTION.

[We make room with some difficulty, this week, for the commencement of an account of various new and important experiments on digestion, by Prof. Schultz, of Berlin. It has just reached us in the Lon. Lancet.]

My object in the following experiments was to ascertain, more particularly, the relative digestibility of different articles of food in dogs and cats; and, for this purpose, I fed the animals with several sorts of food at the same time.

Exp. 1.—A dog of a middling size, which for some time previously had been fed upon potatoes, received as much as he could eat of boiled, raw, and roasted horseflesh, in pieces of from half to one ounce in weight. He ate, in all, about a pound. After three hours he was killed; the digestion had, in the mean time, made but little progress, and there was only a very small quantity of chyme collected at the pylorus. The pieces of boiled meat were everywhere, at the surface, dissolved into chyme, and were strongly acid, even in the middle, and after being washed with water. The raw pieces were less dissolved, but had become of a livid hue; and were also less strongly acid at the surface, and in the middle not at all so. The roasted pieces were, even at the surface, not perceptibly altered; they were covered with acid chyme, but upon being washed with water, showed no further acidity. The alteration of the boiled and raw pieces increased gradually from the cardia to the pylorus; it was imperceptible at the cardia, and greatest at the pylorus. There was no difference between the pieces which lay at the parietes of the stomach, and those which lay in the centre. The stomach was firmly contracted about the food, and without any peristaltic motion.

Exp. 2.—A large dog, that had been fed with potatoes, received in the morning, at 8 o'clock, from ½ to 1½ ounce pieces of boiled, raw and roasted horseflesh; in all, about 2½ pounds. At three in the afternoon (after seven hours) he was killed. Although the digestion had proceeded so far that nearly two ounces of chyme were collected at the pylorus, yet the pieces of meat which lay at the cardia were still unchanged. The alteration increased gradually towards the pylorus, and here the pieces were about half dissolved, none being entirely so. The boiled meat was the most dissolved, and was most acid at its centre. The raw followed next; and by it the blue paper was reddened in the inside, as well as at the surface. The roasted pieces were also acid, even after being washed, but blue paper was scarcely altered by the inside. A peristaltic motion was present at the pylorus, which from time to time separated itself from the cardia, by the strong contraction of its circular fibres. The cardia was firmly contracted about the food,

and without any perceptible motion. The thermometer stood in the stomach and chest at 32 degrees Reaumur, and in the lower parts of the abdomen at 31.

Exp. 3.—A dog of moderate size was fed with a soup made of potatoes, which was mixed with several large pieces, and a little tallow, with which the potatoes were boiled. Six hours after, the soup had disappeared from the stomach; the larger pieces were but little altered, and only somewhat rounded at the edges. There was besides a little chyme, mixed with a few fleshy fibres that were probably left from the last meal; it was strongly acid, but the pieces of potato were but slightly so at their surface, and not at all at their centre. The gall bladder was much distended, and contained 2⅔ drachms of bile. Microscopic observation showed that the starch globules of the potato soup were still to be found unchanged, and in great number, in the intestines. The temperature of the stomach and the chest was 32 degrees Reau., of the liver and lower parts of the abdomen 31.

The stomach, as it contained very little food, was much collapsed, and had a peristaltic motion in its whole extent, which, however, was strongest at the pylorus. This motion ceased after half an hour, and when I brought the two poles of a galvanic apparatus into contact with the stomach, strong contractions ensued; the separation of the pylorus from the cardia was particularly plain. I had laid bare the nervus vagus in the neck, and brought the two poles into contact with it, but after the spontaneous motion had ceased, no effect was produced in the stomach. On the other hand, as long as the peristaltic motion lasted, it was greatly increased by the galvanic excitement of the nervus vagus.

Exp. 4.—A well-fed dog, that would eat no vegetable food, was fed with 1 ounce of bread, 2 ounces of roasted veal, which was very tender, the same quantity of raw ham, and 4 ounces of boiled unsalted beef. He was killed nine hours after. Three fourths of the food were dissolved to chyme. The boiled beef was entirely digested, and only to be recognized by a few fibres mixed with the chyme; the bread was half dissolved, and its remaining part, which was mostly crust, was, like the chyme, strongly acid, even in the middle part. One fourth of the raw ham had disappeared, and the other part, which was half fat, did not appear to be at all altered, and was not acid after being washed with water. The roasted veal was little changed, and acid only at the surface, and not in the inside. The peristaltic motion was observed at the pylorus, but not at the fundus; the temperature of the chest and abdomen was 31 1-10 degrees Reau.

Exp. 5.—A middling-sized dog, which had fasted the day before, was fed with 6 oysters, 2 ounces of smoked salmon, 1 of salt herring, and 2 of boiled pork, mutton and unsalted beef. He was killed six hours after. The oysters were perfectly dissolved, except the closing muscle of one, and their parts no longer perceptible in the chyme. A third of the pork, and three fourths of the mutton and beef were dissolved; the acid of the last was the strongest. The pieces of salmon were still further divided, but not much digested; the herring was perfectly unchanged, and was acid only at the surface, and not in the inside.

Exp. 6.—Two half-grown cats, that had fasted twelve hours, were fed at the same time with similar pieces of raw, boiled and roasted veal; and further, with boiled beef and fish, as much as they would eat. One of them was killed three hours after. The stomach was without motion, and firmly contracted about the food; the digestion had made but little progress, and about two drachms only of chyme were collected at the pylorus. The whole mass of the food had formed a ball, in which the different parts were not so easily recognized as in the dog; for cats tear and masticate their food, while dogs swallow theirs in large pieces. At the cardia, the surface of this ball was neutral, and the food was perfectly unchanged. In the middle, between the cardia and the pylorus, blue litmus paper was somewhat reddened, and at the pylorus itself as strongly as usual, by chyme. The ball was cut through the middle with a knife, and it was seen that the degree of acidity was the same at the parietes of the stomach and in the inside of the mass. It increased here, also, towards the pylorus. The beef was the most digested, and the boiled veal more than the raw; the fish and roasted veal, however, were still unaltered.

The second cat was killed after seven hours. The greatest part of the contents of the stomach were dissolved to chyme, and the stomach itself was three fourths empty; the peristaltic motion, particularly at the pylorus, was also observed. A few pieces of fish were found among the undigested parts, the rest was mostly raw and roasted veal.

The temperature of the abdomen was 31 degrees Reau., of the chest and stomach 31 1-10.

Exp. 7.—A full-grown cat was fed with potato soup and a piece of old cheese, and, after three hours, killed. The cheese was mostly digested, and its small remaining part was strongly acid, even in the inside. The potato soup was little altered, and only rendered somewhat more fluid; it very slightly reddened the litmus paper.

Exp. 8.—A dog was fed with boiled, raw and roasted veal, boiled fowl, fish, a little boiled unsalted beef, and a piece of old cheese. He was killed four hours after. The cheese was entirely dissolved, and only to be recognized by the smell of the chyme. The boiled fowl was entirely, the beef and veal for the most part, digested, and their remains had fallen into small pieces. The raw veal was dissolved at its surface, and its color had become livid; it was acid at the surface, and neutral in the middle. The pieces of fish were still further divided, but it appeared to be merely through the mechanical motion of the stomach, for the muscular layers of fish were very loosely connected. The larger pieces, after washing, were but slightly acid; whereas the remains of the boiled beef were strongly acid, even in the middle.

Exp. 9.—A cat was fed in the morning, at nine o'clock, with flour and potato soup, and further, with a little carrot and boiled beef. It was killed at twelve o'clock. A piece of meat, which the animal had swallowed last, and which was found at the cardia in the midst of the soup, was still unchanged. The rest at the pylorus was quite dissolved; the soup was become somewhat more fluid, and it was slightly acid; the carrot and a few pieces of potato were unaltered, and without acidity in the inside.

Remark.—I have often observed in dogs, that the order in which the different sorts of food are swallowed considerably alters the relative digestibility; for I have several times seen indigestible matter which was swallowed first, and therefore came first to the pylorus, digested before other food which was more easily digestible, but which being swallowed later, came later to the pylorus.

Exp. 10.—A dog of middle size, which had been fed upon flour and potato soup, and afterwards allowed to fast 24 hours, was fed at nine o'clock in the morning with one or one and a half ounces of old cheese; two, the same quantity of Dutch cheese; three, the meat from the claws and tails of two large crabs; four, three ounces of roasted pork; five, an ounce of the fat of a smoked goose; and six, with four ounces of boiled unsalted beef. At half past one he was killed; nearly one half of the whole mass was changed into chyle; a pretty strong peristaltic motion was observed at the pylorus. I observed, also, an undulating motion along the course of the large curvature; the small curvature, however, was perfectly motionless.

1. The boiled beef, of which a few small pieces were still visible, was dissolved. 2. The old cheese was entirely, and the Dutch cheese mostly, dissolved; its remaining part was chiefly rind, the surface and inside of which were strongly acid, even after washing with water. 3. The roasted pork was not much altered at the surface, although the inside was somewhat acid. 4. The crabs' flesh and goose fat were found in the chyme perfectly unchanged; the litmus paper, however, was slightly reddened at the surface of the crabs' flesh after it was washed, but not in the inside. The fat, on the contrary, showed no acidity after being washed, even at the surface.

(To be continued.)

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JANUARY 15, 1840.

PROGRESS OF SMALLPOX.

Medical correspondents in the country are almost daily writing to know the state of the epidemic smallpox in Boston. The only answer we can give them is, that vulgar report has greatly magnified the number of cases, from the beginning up to the present time. Were we to hazard an individual opinion, we should say that the disease has considerably abated in the city. The number of deaths, however, in the weekly report of the Superintendent of Burials, shows that the malady is still here. Much alarm is manifested in the interior. The smallpox has gradually crept from Boston, so say the same gentlemen, in all directions, till villages in New Hampshire, Maine, Vermont, and various towns in Massachusetts, have got it in the midst of them. Pepperell, in this State, seems to have been severely scourged—and from that point it is feared that the infection will radiate through neighboring towns, to the sacrifice of many lives. We would say, therefore, vaccinate—there is no other way of circum-

scribing this shocking distemper. Thus far, the deaths in Boston, since September 2d, when cases first occurred, to Monday morning last, were 80. Since the first day of the present month, up to Monday morning, 22 have died.

Dr. Hun's Introductory Lecture.—At rather a late period, this discourse, which could not have been otherwise than well received, has reached us. However well constructed, these introductories are fitted for a particular occasion, and therefore not designed to exercise a permanent influence anywhere. But with regard to Dr. Hun's lecture, it is a sound, practical essay, which gives us the strongest assurance of the qualifications of the author for teaching. The chair of the Institute of Medicine in the Albany Medical College will never fall into disrepute while its occupant has the good sense, the science and tact for impressing his hearers with elevated and important truths which characterize this pamphlet.

We have noticed, with feelings of satisfaction, the improving character of all the introductories, the present season. They are altogether superior to those of past years, and those who preserve them will be in possession of the best specimens of modern medical literature in our country.

Dr. May's Introductory Lecture.—John Frederick May, M.D., Professor of Anatomy and Physiology in the medical department of the Columbian College, at the city of Washington, was solicited by the class to permit them to publish his introductory. Although Dr. May assured the young gentlemen that it was not written for the press, he consented, and we coincide with the committee in believing that it will be read and reread with pleasure by many who have not the honor of a personal acquaintance with the talented author. It is quite impossible to copy from all the pamphlets and other excellent things that pour in upon a periodical like ours in the course of a week; but we can assure those who are so fortunate as to be put in possession of Dr. May's lecture, that they will read it with profit and delight.

The Epidemic of Augusta, Geo.—At a meeting of the physicians of Augusta, held on the 13th of November last, it was resolved that a committee of three be appointed to inquire into the origin and causes which gave rise to the epidemic in August, and Drs. F. M. Robertson, J. P. Garvin and P. F. Eve, were selected to perform that duty. "The principle which vitiated our atmosphere," says the committee, "was the cause of the disease; without which the epidemic could never have had an existence; and which did not require the introduction of foreign cases to produce an explosion. The torch had been applied before the introduction of foreign cases, and was silently, and unobserved by the multitude, performing its work of death and desolation."

Very many curious facts have been collected by the committee, which must be regarded as exceedingly valuable to those who are less conversant than themselves, with the character of the scourge which they have so clearly and ably investigated.

Vermont Academy of Medicine.—After a period of suspension in the course of annual lectures, which were given many successive years with

success at Castleton, Vt., a re-organization of the Academy has been effected, and a medical faculty created, as will be seen by our advertising page.

No one will presume to say there is any want of talent in the catalogue of instructers, since some of them are well known for their experience and ability to teach the several branches annexed to their names. The only query is, how it is possible for the State of Vermont to support two schools. That at Woodstock is considered well established—but we wish them both all imaginable success.

Secondary Smallpox.—A discussion is going on in the London Medical periodicals respecting the occurrence of smallpox twice. Some physicians, having never seen such cases, are disposed to doubt their occurrence, or at least to consider them exceedingly rare. It seems certain, however, that they do occasionally occur in Europe as well as in this country, as the following facts, related by the editor of the London Lancet, will show. If vaccination, therefore, is not *always* a preventive of smallpox, it may afford some explanation, if not consolation, to know that neither does that disease in all cases protect from itself.

"In the Würtemberg epidemic 634 persons were attacked by *true* smallpox; of these 39 had been affected by true smallpox at some previous period, being a proportion of 1 in 16. The nature of the first attack was determined, partly from the evident traces of confluent smallpox on the body, and partly from the testimony of the medical men by whom the patients had been attended. Fourteen of the thirty-nine fell victims to the second attack In the epidemic described by Möhl, 153 out of 988 persons had a second attack of smallpox; 31 of the 153 died; here, however, the evidence of the first attack is far from being so precise as during the Würtemberg epidemic."

Pituitary Body or Gland.—If the researches of M. Bazin be confirmed by other anatomists, the true nature of the pituitary body has at length been discovered. M. Bazin regards this body as a true nervous ganglion, and describes the various filaments which are in connection with it. The principal pass to the internal carotid artery, and join its flexus; others anastomose with filaments from the cavernous flexus. M. Bazin likewise has discovered connections between this (the cephalic) ganglion and the others which are already known, and in addition mentions one going to a ganglion on the first division of the fifth pair of nerves.—*French Lancet.*

Singular convulsive Disease affecting five Children in one Family. By Andrew Dewar, Surgeon, Dunfermline.—This paper adds another authentic chapter to the many histories of strange anomalous convulsive diseases already on record; and strikingly illustrates, also, the important points of the propagation of such affections by *imitation*, and of their cure by the old Boerhaavian remedy, *terror*. The disease was most judiciously treated by the removal of the children from their home; and they were all cured by keeping them separate there; by threatening them with the cold affusion, searing irons, &c., except the one originally affected, who required other means for her recovery.—*Edin. Med. and Surg. Jour.*

Economic Formula for Hydriodate of Potash. By Wm. Nichols, M.R.C.S.—Rub together as much iodine and potass hydras (the potassa fusa of the former Pharmacopœia) as will render the mixture almost colorless, and add as much distilled water as will make, together, say, two fluid ounces.

The chemical equivalents of the iodine and potassa would of course be the proper proportions, provided they could be obtained perfectly pure, which, in commerce, I believe to be seldom the case. I therefore choose to get my solution prepared as above, of an amber color, showing the iodine to be slightly in excess, and I afterwards add a few drops of the liq. potassæ, until the solution becomes perfectly colorless. By previously weighing the proportions of solid ingredients, the quantity of the salt in solution will be indicated; and as it is extremely soluble, it may be prepared so that each fluid drachm will contain a drachm of the hydriodate. —*Lancet.*

Medical Miscellany.—At 12 o'clock, Wednesday, January 22d, the annual meeting of the Trustees of the Massachusetts General Hospital will be held, in Allen street.—A second shipment of Dr. Morton's work on American skulls, is on the way to Boston, for subscribers at the North.—Mr. Combe, the phrenologist, is on his way to Buffalo.—Lectures on *physiognomy* are being delivered in this city—a revivification of the once popular doctrine of Lavater, that the character of an individual is exhibited in the face.—Twenty-one cases of smallpox and thirteen of varioloid have occurred in the town of Pepperell, Mass.; six persons, up to Wednesday last, had died; and it is supposed that the disease is on the increase in that region.—We understand that the new building for the Vermont Medical College, in Woodstock, is now nearly completed, and will be entirely finished in season for the next course of lectures. The site is one of the most beautiful that could have been selected in New England. The collonade of the east front commands a delightful view of the village of Woodstock and the surrounding country. The chemical and anatomical lecture rooms, which are now finished, are probably as commodious as any in the country.—A recent instance is recorded in England, in which rabies was communicated through the milk of two ewe sheep to their lambs. The lambs were removed from the sheep in a fortnight after the latter were bitten by a dog laboring under hydrophobia, and a month before any symptoms of the disease were exhibited in the sheep. The lambs were seized about a fortnight later than the sheep.—Number of deaths the last year in Nantucket, with a population of about 10,000, 201, including 15 who died abroad. In 1838, the number was 186.

Married,—In Whitingham, Vt., Daniel D. Wilcox, M.D., of Jacksonville, to Miss Dorothy Smead.

Died,—In Putney, Vt., Dr. Alexander Campbell, 70.—In Dartmouth, Ma., Dr. Simon Winslow, 58.

Whole number of deaths in Boston for the week ending Jan. 11, 43. Males, 24—females, 19.

Of consumption, 6—smallpox, 13—old age, 1—infantile, 1—child-bed, 2—typhous fever, 1—croup, 1—teething, 1—scarlet fever, 1—lung fever, 2—intemperance, 1—burn, 1—disease of the brain, 1—suicide, 1—fits, 2—inflammation of the lungs, 1—diarrhœa, 1—cancer in the stomach, 1—dropsy on the brain, 1—inflammation of the brain, 1.

THE BOSTON MEDICAL AND SURGICAL JOURNAL is published every Wednesday, by D. CLAPP, JR., at 184 Washington St., corner of Franklin St., to whom all communications must be addressed, post paid. It is also published in Monthly Parts, with a printed cover. There are two volumes each year. J. V. C. SMITH, M.D., Editor. Price $3,00 a year in advance, $3,50 after three months, or $4,00 if not paid within the year. Two copies to the same address, for $5,00 a year, in advance. Orders from a distance must be accompanied by payment in advance or satisfactory reference. Postage the same as for a newspaper.